



**CALIFORNIA  
HIGH-SPEED RAIL  
AUTHORITY**

**BRIEFING: JUNE 2010 EXECUTIVE/ADMIN COMMITTEE MEETING AGENDA ITEM #6**

**TO:** Board Chairman Curt Pringle, Member Quentin Kopp, and  
Member Fran Florez

**FROM:** Carrie Pourvahidi, Deputy Executive Director  
Tony Daniels, Program Director

**DATE:** June 2, 2010

**RE:** Item 6: Los Angeles – Anaheim Regional Engineering Contract

---

**Summary**

The scope, schedule, and cost of the Regional Consultant's contract for the LA-Anaheim section of the California High-Speed Train Project have grown incrementally but substantially since its execution in January 2007. Originally envisioned as a three-year, \$21.4 million effort, it has evolved into potentially a five-year/substantially higher cost effort. The current authorized amount of the STV contract is \$23 million, which is projected to be fully spent by June 30, 2010. Overall, the expanded work scope is currently estimated to be about 60% complete, but the full scope and schedule are still indefinite, and its original contract award amount inconsistent with those of other sections.

To date a partial draft EIR/EIS document and 15% design package has been produced for a single alternative that includes two dedicated high-speed train (HST) tracks from LA Union Station (LAUS) to the ARTIC station in Anaheim and a potential intermediate HST station at Norwalk/Santa Fe Springs or Fullerton. This work was completed only after significant amounts of time were spent investigating other alternatives that were ultimately not carried forward.

More recently, and unrelated to the project's growth as described above, the California High-Speed Rail Authority (Authority) was requested to bring back a second build alternative that has yet to be fully defined or determined to be feasible or acceptable. At its April meeting, the Board gave direction to investigate this alternative.

There are currently many unresolved technical and operational issues, alternative track layouts that have not yet been agreed upon by all the interested parties, unresolved community concerns in LA, Anaheim, and the Gateway Cities, scheduling challenges to meet the desired September 2011 Notice of Determination/Record of Decision (NOD/ROD) date to remain eligible for federal stimulus funding, and contractual issues that need to be resolved by June 30, 2010 so as not to impact the progress of the work.

Authority Board action will be needed to amend the STV contract prior to the end of the fiscal year to enable the work to proceed uninterrupted.

The following narrative describes how a series of events led to the current situation, and summarizes the cost incurred (in the shaded boxes below).

## **Background**

STV, Incorporated (STV) was selected by the Authority to be the Regional Consultant for preparation of project-level environmental documents, through the NOD/ROD, and Preliminary Engineering, through 30% design, for the Orange County to Los Angeles section of the California High-Speed Train Project. The contract with STV was executed on January 8, 2007.

The Los Angeles to Irvine segment of the California High-Speed Train Project was originally conceived as a shared-track corridor with high-speed trains operating with conventional passenger trains on the same set of tracks. In the original scenario, the concept called for a total of four tracks to be constructed in the LOSSAN corridor and that 2 tracks would be dedicated to freight traffic, and 2 tracks would be dedicated to passenger traffic (both conventional and HST). For the majority of the corridor, the existing railroad right of way is 100 feet wide, and at places up to 150 feet wide, and could accommodate four tracks without acquiring additional property. Between Fullerton and Anaheim, OCTA owns the double-track railroad. Within this section, there is a 1.5- mile long segment 50 feet wide, abutted by residential properties.

The Notice of Preparation/Notice of Intent (NOP/NOI) published by the Federal and State lead agencies (FRA and the Authority) responsible for the preparation of an Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) under the National Environmental Policy Act (NEPA) and state of California Environmental Quality Act (CEQA), defined the need to look at the 4-track alternative from the Program-level document, as well as an HST dedicated track alignment in the event FRA rulings excluded use of shared track for high-speed trains or for other operational reasons. A fifth track was to be analyzed as part of the "Definition of Alternatives." A sixth track was explicitly not to be analyzed initially, but this direction was later amended, when a 4+2 dedicated track alternative was added.

STV's FY 2008 Work Scope identified taking design of both a 5-track (shared) alternative and a 3+2 or 4+2 HST dedicated track alternative to an approximate 5% level of design, and then taking the selected alternative to 15% design. In the spring of 2008, the LA Regional Team (Regional Consultant (STV) and Program Management Team (PMT)) convened a LA Region Alternatives Workshop with the Authority and the FRA. Meeting notes from the Alternatives Workshop held April 07, 2008 record the following discussion/ decisions/ direction:

- **Program-Level Shared-Track Alternative** (2+2 Fullerton-Hobart Yard; 2 tracks Fullerton to Anaheim): Operations analyses and a letter from BNSF in early 2008 confirm that this alternative is not able to accommodate projected future freight levels in the LOSSAN Corridor. **Conclusion: "Alternative will not be carried forward."**
- **Expanded Shared-Track Alternative** (3 freight/passenger + 2 passenger tracks, Fullerton to Hobart Yard; 2 tracks Fullerton to Anaheim): Operations analyses currently project that some passenger services (Amtrak + Metrolink 91 Line) may need to run on the freight tracks. Both at-grade and aerial configurations for the entire corridor were reviewed in the workshop. **Conclusion: Further Operations analyses will be needed to confirm feasibility.**

- **Dedicated HST Alternative** (4 freight/passenger + 2 dedicated HST tracks, Fullerton to Hobart Yard; 2 freight/passenger + 2 dedicated HST tracks, Fullerton to Anaheim): Both at-grade and aerial configurations for the entire corridor were reviewed at the workshop.  
**Conclusion/ direction: Continue to study this alternative.**

Following this workshop, STV continued to develop and analyze the Expanded Shared-Track and Dedicated-HST Alternatives and the PMT continued to study the operational feasibility of the shared-track alternatives. The analysis presented in the PMT's July 2008 CHSTP "Los Angeles to Anaheim Concept Level Operational Feasibility Study" concluded that:

- Four mainline tracks between Fullerton and Redondo Junction would not provide sufficient capacity to support "shared use" operations between freight, conventional passenger, and high-speed trains. Four mainline tracks would provide sufficient capacity to operate freight and conventional passenger services with consideration for future growth beyond 2030. Two dedicated tracks would be needed to support the proposed CHST service.
- Two mainline tracks between Fullerton and Anaheim would not provide sufficient capacity to support a reliable "shared use" operation between freight, conventional passenger and the HST. Four mainline tracks between Fullerton and Anaheim are required – two for a combination of freight and conventional passenger trains and two for HST service.

On December 8, 2008, a CHSRA-FRA Workshop on the Anaheim-Los Angeles Project EIR/EIS discussed and confirmed that:

- **The Program-Level Shared-Track Alternative (2+2)** should be eliminated because of insufficient capacity for freight and passenger trains.
- **The Expanded Shared-Track Alternative (3+2)** was developed after the Program-Level Shared-Track Alternative was eliminated. Given that its impacts are nearly as large as the Dedicated-HST Alternative, and its inferior operating characteristics, the Shared-Track Alternative was proposed to be screened out in the AA report.
- **Dedicated-HST Alternative (4+2) is to be carried forward as the baseline alternative for EIR/EIS.** The 4+2 utilizes two tracks for HST trains only, and four tracks for all other operators in the corridor (BNSF, Metrolink, and Amtrak. Intermediate station options will be investigated at Fullerton or Norwalk/Santa Fe Springs.

In late 2008, the project faced the prospect of reduced funding from the State. STV dramatically reduced its effort as a result of a letter received from the Authority on December 18, 2008 that indicated that work done on the project was at risk until a new budget was passed by the State Legislature. With a slow down in the work effort, and a need to conserve remaining authorization, STV stopped all further alignment and other engineering work until April 6, 2009, when additional authorization to complete FY 2009 work was received. At that point, work continued on the alignment options and a revised Alternatives Analysis report was submitted in late April 2009 to the PMT and Authority.

STV spent approximately \$2.2 million in the 15 months between January 2007 and April 2008. Funding was limited in this timeframe, especially from August 2007 and April 2008, which slowed the effort. In the nine months from April 1, 2008 through December 2008 STV spent approximately \$5.7 million studying the 3+2 shared-track and 4+2 Dedicated HST alternatives.

In December 2008, 24 months after the start of work, the shared-track alternatives were dropped in favor of a single build alternative – the dedicated HST alternative. Another approximately \$1.3 million was spent by a skeleton STV staff from December 2008 and April 2009 during the funding hiatus. Work re-commenced in April 2009, focused on the dedicated HST alternative. The Board was briefed in June 2009, summarizing the status of the effort.

## Design Evolution

The LA – Anaheim was originally designed as a shared corridor with a number of Metrolink trains expected to share the HST track. Shared rail alignment infrastructure, such as 15.0 foot track centers, shared access control and drainage facilities, etc. were used in setting a basic alignment anticipating that conventional and high-speed trains were configured as a single railroad operation. During late 2008 and early 2009, operational analyses were performed that confirmed that there was not sufficient capacity for both the CHSTP and Metrolink services in a shared-use corridor. By the time of the alignment review session with STV on February 17, 2009, the Authority had accepted the report and the AA was in preparation to confirm the use of dedicated high-speed tracks.

In April 2009, STV was directed to prepare the 15% design based on the dedicated HST alternative and an Administrative Draft EIR/EIS by the end of 2009. In July 2009, STV completed the alignment for right of way analysis work. In order to meet the schedule, STV supplemented the environmental sub-consultant on the project (Ultra Systems) with additional resources (from ICF Jones & Stokes) to conduct the impact analysis of the environmental documents.

The Alternatives Analysis Report was released to participating Agencies and Corridor Cities in late April 2009, and STV engaged in Corridor City Workshops through July and August 2009 to clarify the design concepts and receive feedback. This Alternatives Analysis Report was not well received by the corridor cities and additional alignment options and/or changes were requested.

In June 2009, STV presented the Alternatives Analysis Report to the Authority Board and advised them that only the No Build and Dedicated HST Alternatives would be evaluated and designed further. The Dedicated HST Alternative was recommended as the preferred alternative because it accommodates the 5 HSTs per hour as required in the CHSRA Phase 1 Operating Plan, it meets FRA's operations and safety guidelines, and it provides operational enhancements compared to the shared-track alternatives, with modest increases in ROW and infrastructure needs.

In the summer of 2009, STV investigated numerous possible locations along the corridor for layover facility sites. Seven different sites along the corridor were identified and STV did preliminary design work on four of them.

The PMT met with STV on September 30, 2009 to review and agree on ("freeze") a final set of alignment options to include in the Final 15% Design and Admin Draft EIR/EIS. As directed, STV produced an Admin Draft EIR/EIS and Final 15% Design (absent the Los Angeles Union Station and ARTIC Station due to significant changes occurring at both of those locations) in December 2009. Subsequently, STV has continued evaluating additional alternatives requested by the corridor cities and Metro and updating the 15% design and Admin Draft EIR/EIS to incorporate the requested changes.

From April 2009 through December 2009, STV spent approximately \$8.5 million to produce the Administrative Draft EIR/EIS and 15% design for the dedicated HST alternative, for a total of \$17.7 million from project inception. From January 1, 2010 through June 30, 2010 an estimated \$5.3 million will be spent studying additional alignment and station alternatives, bringing the total contract expenditures to \$23.0 million, which is the current contract limit.

Since the fall of 2009, numerous additional alternatives have been requested by the corridor cities and railroad operators in the LOSSAN Corridor, and extensive effort has been expended by STV and the PMT to address these community concerns:

- The LA City Council passed a resolution requiring additional station alternatives to be studied (so-called Vignes St. options) at LAUS. Various options have been developed and evaluated by STV from December 2009 to the present. Currently, an additional at-grade LAUS alternative proposed by Metro appears to be feasible and is expected to be advanced to 15% design and inclusion in the Draft EIR/EIS documents.
- The City of Anaheim expressed its concern about proposed alignment options, as well as how HST would access and utilize ARTIC. The ROW width narrows to 50 feet for approximately 1.5 miles through downtown Anaheim. Based on a request by the City, STV was directed to include a deep tunnel option through this area for the Dedicated HST Alternative. Several ARTIC station alternatives have also been developed and evaluated including an at-grade and underground alternative. The at-grade station design in conjunction with the shared-track alternative, if determined to be feasible and if approved by the Board, may become the preferred configuration.
- In March 2010 Metro and OCTA requested the Authority to consider including a rationalized shared-track alternative in the Draft EIR/EIS and 15% design documents. The Board directed on April 8 that this alternative be investigated, and if found feasible, it would be added into the Alternatives Analysis process and the Draft EIR/EIS report.

### **Conclusions and Next Steps**

The start-and-stop nature of the project due to changes in alternatives, budget issues, and recent community involvement and interest have all contributed to delays and additional level of effort to complete the PE/EIR/EIS documents. All told, the contract effort has been extended about 2 years more than originally planned and the expected cost is now projected to be approximately twice that originally envisioned. In parallel with this, the capital cost of the infrastructure improvements in this corridor have also doubled, so the ratio of environmental review/preliminary engineering to the capital construction cost has remained virtually unchanged.

The effects of adding a shared-track alternative to the Draft EIR/EIS Report and 15% design to STV's current workload have not yet been determined.

STV is projecting they will reach their authorized contract limit (\$23 million) in June 2010. The scope and schedule of the remaining effort to complete the PE to 30% design and EIR/EIS to issuance of the NOD/ROD is not well defined and difficult to accurately predict given the unresolved scope and community issues.

At the Authority's request STV prepared and submitted a proposed Annual Work Plan for FY2010-11 contingent on the Board approving a contract amendment to raise the contract limit to cover the proposed additional services. The plan proposes to spend \$10 million to complete the Draft EIR/EIS and 15% design in FY2010-11. From July 1, 2011 to completion of NOD/ROD and 30% design the cost has yet to be fully estimated.

### **Staff Recommendation**

Staff requests that the Board address the scope, schedule and contract issues, including the not-yet-projected funding necessary to complete the required work, and amend the STV contract to continue the work necessary to complete the DEIR/EIS/15% design in FY 2010-11.